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PATENT

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TC 1700

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
Jinichiro Kato et al. ) Group Art Unit: 1711  
Application No.: 10/066,712 ) Examiner: Samuel A. Acquah  
Filed: February 6, 2002 )  
For: Poly(trimethylene terephthalate) and a )  
Process for Producing the Same )

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**RULE 132 DECLARATION**

I, DR. JINICHIRO KATO, do hereby declare that I am one of the inventors of the above-identified application and that I am a citizen of Japan, residing at 34 Miyazaki,  
Sakurazono-cho, Nobeoka-shi, Japan. That in March, 1985, I graduated from Oka University, Graduate School of Engineering, majoring in co-enzyme chemistry, and received a Doctorate of Engineering at Osaka University. That since April, 1985, I have been an employee of Asahi Kasei Kabushiki Kaisha. While employed by Asahi Kasei, I have been engaged in research work on the synthesis of various synthetic resins, and development of polyester fiber, most recently, poly(trimethylene terephthalate) fiber.

The experiment described below was performed by me or under my direct supervision and control.

I am familiar with the history of prosecution of this application and the Examiner's opinion that the claims are unpatentable under 35 U.S.C. §102(b) for being anticipated by U.S. Patent No. 5,798,433 to Schmidt et al. (hereafter Schmidt).

The purpose of the following experiment is to show that a poly(trimethylene terephthalate) produced in Example 6 of Schmidt has an L\*value of less than 80 and an "X" value of less than 40, where "X" is the ratio of terminal OH groups to the total of terminal end groups in the polymer.

### 1. Experiment

(a) The composition of the charge is shown in the following table:

PDO wt. ratio to (TPA+PDO)	Esterification catalyst		Coloring modifier	H <sub>3</sub> PO <sub>4</sub>	Polycondensation catalyst	
	Kind	ppm (Ti)	ppm (Co) <sup>*2</sup>	ppm (P)	Kind	ppm (Sb)
0.567	TiO <sub>2</sub> /SiO <sub>2</sub> <sup>*1</sup>	50	40	40	SbAc <sub>3</sub>	250

\*1: Available from AKZO.

\*2: Amount of Cobaltation: Cobalt acetate corresponding to 10 ppm Cobalt.

(b) Conditions of reaction.

Reaction temperatures and polycondensation time are shown in the table below:

Temp. at ester-exchange	Temp. at polycondensation	Period of polycondensation <sup>*1</sup>
240°C	260°C	180 min

\*1: Time at which agitating torque leveled off.

Additions of the esterification catalyst, polycondensation catalyst, cobalt acetate, and phosphorous acid were conducted in accordance with the description at column 4, lines 5 to 14 of Schmidt. Regarding conditions not described in Schmidt, the reaction

vessel and agitator blade and agitation conditions used were according to Comparative Example 1 of the present application. See page 23.

## 2. Results of the experiment

	[η] <sup>*1</sup>	L* value	b* value	[-OH] m equiv. /kg	[-COOH] m equiv. /kg	[Allyl group]	X value
Resultant Polymer	0.921	76	0.6	32	21	38	35
Described data of Example 6	0.912	-	-0.5	-	19	-	-

\*1: Intrinsic viscosity of the polymer was sampled when agitation torque leveled off (= the maximum possible viscosity).

The intrinsic viscosity and respective terminal end group contents (X value) were determined by the methods described on page 22, lines 10 to 33 of the present application. The L\* value and b\* value were determined according to JIS Z8729.

## 3. Conclusions

As shown in the Table above, the resultant polymer produced according to the teachings of Example 6 of Schmidt has an X value of 35 and an L\* value of 76. These are less than the respective values now set forth in the claims of the present application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under

Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: November 17, 2003

By:

  
JINICHIRO KATO

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